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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
DADA, BEEMNET W	

ART UNIT	PAPER NUMBER
2135	

DATE MAILED: 05/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/812,441	GARRETT ET AL.	
	Examiner	Art Unit	
	Beemnet W. Dada	2135	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 February 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *2/22/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in reply to an amendment filed on February 22, 2005. Claims 1, 7, 8, 13, 19 and 20 have been amended. Claims 1-24 are pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 5-13 and 17-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Valencia (US Patent 6,308,213 B1) in view of Applicant's Admitted Prior Art (hereinafter AAPA).

4. As per claim 1, Valencia teaches a method of operating a service network connected to an access network infrastructure shared with other service networks, comprising the steps of:

receiving, at a tunneling endpoint (i.e., gateway) in the service network, an encapsulated packet transmitted from a network device (i.e., remote client associated network access device, figure, 2, units 32 and 27) connected to the access network infrastructure and related to services offered by the service network [column 4, lines 4-14 and column 5, lines 57-67], the network device having a source address assigned by the service network (see for example assigned client ID) [column 6, lines 26-45, column 8, line 57-column 9, line 5 and column 10, lines 9-18];

de-encapsulating the packet to reveal the source address (encapsulated packet contains source address of the network device, therefore when the packet is de-encapsulated the source address is available) [column 5, lines 64-67, column 8, line 57-column 9, line 5 and column 10, lines 9-18];

if the access network device is associated with an authorized subscriber to services offered by the service network, forwarding the packet to a destination network address indicated in the packet, thereby effectuating the services offered by the service network [column 4, lines 24-34, column 6, lines 11-17 and lines 25-67].

Valencia does not explicitly teach a network device connected to a high-speed access network infrastructure by an upstream and downstream channel. AAPA discloses a network device connected to a high-speed access network infrastructure by an upstream and downstream channel assigned by the high-speed network infrastructure [see specification page 5, lines 124-153]. It would have been obvious to one having ordinary skill in the art at the time of applicant's invention to modify the teachings of AAPA within the system of Valencia in order to further allow high-speed data transmission in a two way transmission media.

5. As per claim 13, Valencia teaches a method of operating a network access device connected to an access network infrastructure connected to a plurality of service networks, comprising the steps of:

creating a packet related to services offered by a service network (creating an L2F packet, see figure 9, for accessing ISP, see column 3, lines 44-54 and column 4, lines 4-14], the packet having a source address assigned by the service network to the network access device and a first destination address (see for example assigned client ID and further packet

transmitted from remote client to NAS 27 (i.e., a first destination address)) [column 5, lines 58-61, column 8, line 57-column 9, line 5 and column 10, lines 9-18];

encapsulating the packet by including a source address assigned by the access network to the network access device [column 8, line 57-column 9, line 5 and column 10, lines 9-18] and a second destination address (packet forwarded from NAS 27 thru home gateway to local clients 23, i.e., second destination address) corresponding to a tunneling endpoint of the service network [column 5, lines 57-64] and

tunneling the packet to a tunneling endpoint in the service network so that the tunneling endpoint can de-encapsulate the packet and forward the packet to its destination network address thereby effectuating the services offered by the service network [column 4, lines 4-14 and column 5, lines 57-67].

Valencia does not explicitly teach a down stream channel of a high-speed access network infrastructure. AAPA discloses a network device connected to a high-speed access network infrastructure by an upstream and downstream channel assigned by the high-speed network infrastructure [see specification page 5, lines 124-153]. It would have been obvious to one having ordinary skill in the art at the time of applicant's invention to modify the teachings of AAPA within the system of Valencia in order to further allow high-speed data transmission in a two way transmission media.

6. As per claims 5 and 17, the combination of Valencia and AAPA teaches the method as applied above. Furthermore, Valencia teaches the method wherein the tunneling endpoint is a layer two tunneling network server and the packet is de-encapsulated using a layer two tunneling technique [column 5, lines 57-67].

7. As per claims 6 and 18, the combination of Valencia and AAPA teaches the method as applied above. Furthermore, Valencia teaches the method wherein the layer two tunneling technique is L2TP (layer two forwarding, L2F) [Column 5, lines 57-67].

8. As per claims 7 and 19, the combination of Valencia and AAPA teaches the method as applied above. Furthermore, Valencia teaches the method wherein the service networks utilize the Internet Protocol wherein the addresses are Internet Protocol addresses [column 4, lines 24-29 and column 6, lines 33-37].

9. As per claims 8 and 20, the combination of Valencia and AAPA teaches the method as applied above. Furthermore, Valencia teaches the method, wherein the service network is operated by an Internet Service Provider different from an entity operating the access network infrastructure [column 3, lines 44-55].

10. As per claims 9 and 21, the combination of Valencia and AAPA teaches the method as applied above. Furthermore, Valencia teaches the method wherein the service networks are operated by different Internet Service Providers [column 3, lines 44-55 and column 6, lines 33-38].

11. As per claims 10 and 22, the combination of Valencia and AAPA teaches the method as applied above. Furthermore, Valencia teaches the method wherein the service networks offer access to different Internet Protocol-based services [column 3, lines 44-55 and column 6, lines 33-38].

12. As per claims 11 and 23, the combination of Valencia and AAPA teaches the method as applied above. Furthermore, Valencia teaches the method wherein the access network infrastructure comprises a hybrid fiber coaxial network [figure 2 and column 3, lines 44-59].

13. As per claims 12 and 24, the combination of Valencia and AAPA teaches the method as applied above. Furthermore, Valencia teaches wherein the tunneling endpoint is one of a plurality of tunneling endpoints in the service network, each having a virtual interface with a network address, and wherein the encapsulated packet is addressed to the network address of the virtual interface [column 5, lines 1-24].

14. Claims 2-4 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Valencia (US Patent No. 6,308,213 B1) in view of AAPA as applied above and further in view of Aderiano et al. (hereinafter Aderiano) (US Patent No. 6,484,210 B1).

15. As per claims 2-4 and 14-16, Valencia-AAPA teaches the method as applied above. Furthermore, Valencia teaches receiving, at a tunneling endpoint (i.e., gateway) in the service network, an encapsulated packet from an access network device (i.e., network access device associated with a client) connected to the access network infrastructure and related to services offered by the service network [column 4, lines 4-14 and column 5, lines 57-67], wherein the tunneling endpoint is a layer two tunneling network server and the packet is de-encapsulated using a layer two tunneling technique [column 5, lines 57-67]. Valencia fails to teach layer three tunneling technique. However, layer three tunneling technique is well known in the art. For example Adriano teaches layer two and layer three tunneling protocols for data routing and to prevent spoofing [column 7, lines 31-45]. Therefore it would have been obvious to one having

ordinary skill in the art at the time the invention was made to include a layer three tunneling method as per teachings of Adriano into the service network system of Valencia-AAPA in order to route packets using a layer three tunneling technique thereby providing services to layer three compatible devices as well as layer two compatible devices.

Response to Arguments

16. Applicant's arguments filed February 22, 2005 have been fully considered but they are not persuasive. Applicant argues that Valencia fails to teach a high-speed infrastructure having an upstream and downstream channel. Applicant further argues that Valencia fails to teach a first source address assigned to a network access device and a second source address. Examiner disagrees.

It is true that Valencia does not explicitly teach a high-speed infrastructure having an upstream and downstream channel. However, such infrastructure is well known in the art, for example Applicant's Admitted Prior Art teaches such features [see rejections of claim 1 and 13]. Valencia teaches a source address assigned by the service network to the network access device and a first destination address (see for example assigned client ID and further packet transmitted from remote client to NAS 27 (i.e., a first destination address)) [column 5, lines 58-61, column 8, line 57-column 9, line 5 and column 10, lines 9-18], and a second destination address (packet forwarded from NAS 27 thru home gateway to local clients 23, i.e., second destination address) [column 5, lines 57-64].

Conclusion

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Beemnet W. Dada whose telephone number is (571) 272-3847. The examiner can normally be reached on Monday - Friday (9:00 am - 5:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Y. Vu can be reached on (571) 272-3859. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Beemnet Dada

April 26, 2005

KIM VU
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